

FUJITSU DIE-TECH CORPORATION  
OF THE PHILIPPINES

**Innovative Case Study  
Report on  
Production Planning  
Operations in the  
Global Supply Chain**

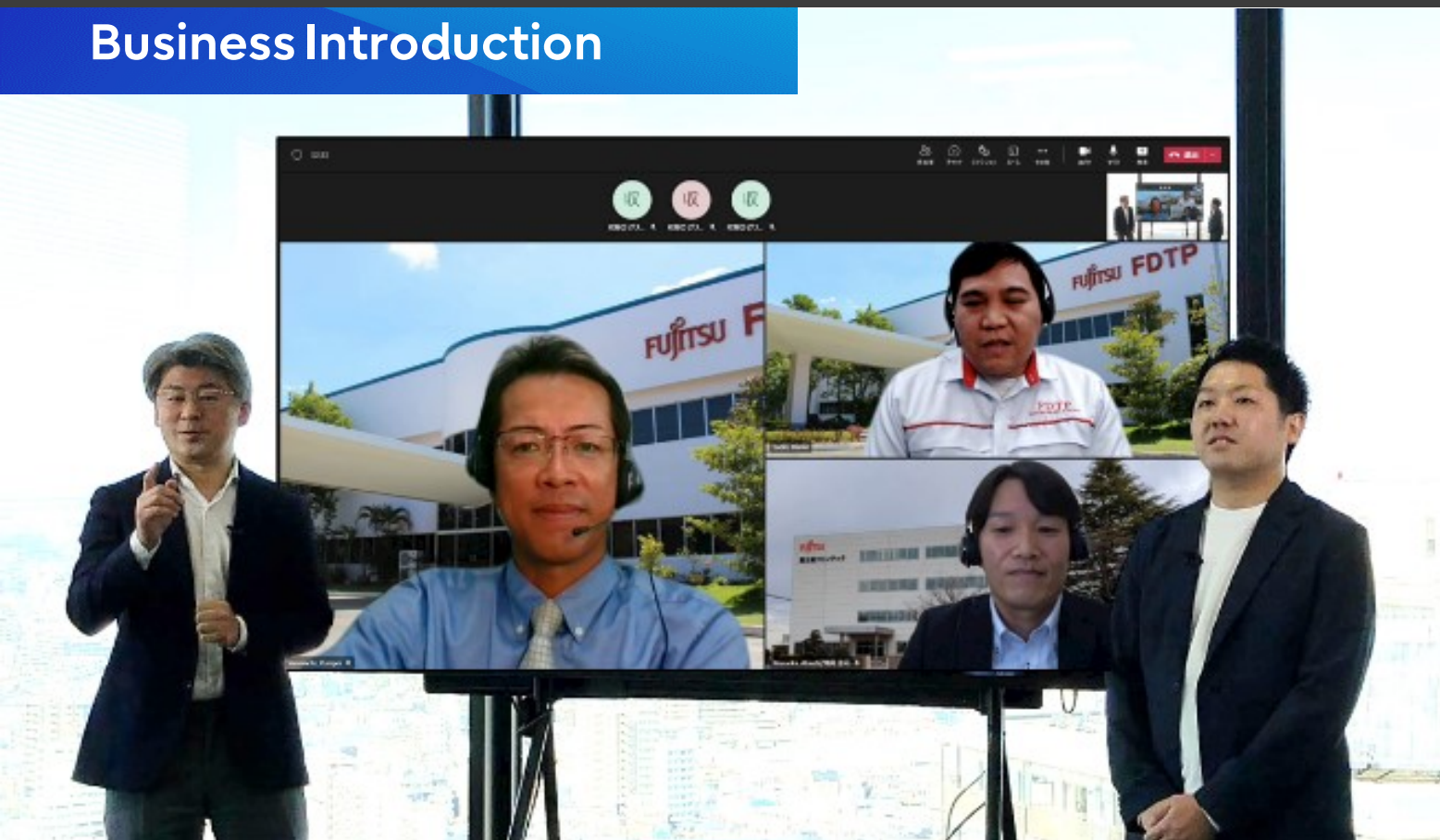
GLOVIA smart PROFOURS



FUJITSU



## Business Introduction



FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES introduced the GLOVIA smart PROFOURS, and this is an interview report on the production planning business innovation case in Fujitsu's global supply chain.

**Sakata** : My name is Sakata from KPMG Consulting. Today, I would like to introduce an example of innovation in production planning operations in Fujitsu's global supply chain. Before we start, I'd like to introduce today's attendees. Thank you.



**KPMG Consulting**  
Operations Strategy Managing Partner  
KPMG Japan Supply Chain Advisory Leadership  
Lead partner  
Operating officer  
**Mr. Hidehiro Sakata**

**Kadoguchi** : This is Kadoguchi from FUJITSU FRONTECH. I am handling the SCM domain system PJ project manager for the entire Group including overseas companies. Today, there are 3 participants from Niigata and Philippines besides Kawasaki.

Mr. Masuoka from Niigata, please introduce yourself.

**Masuoka** : I'm Masuoka from FUJITSU FRONTECH. I was stationed at FDTP until October last year, and at that time I was involved in the introduction of PROFOURS. Thank you and best regards,  
\*head of the Philippines until his return to office in 3Q last year

**Kadoguchi** : Next, Mr. Yamamoto from the Philippines, please introduce yourself.

**Yamamoto** : My name is Yamamoto. I am from Fujitsu DIE-TECH. I am in charge of the production control department. About three years before Mr. Masuoka returned to his post, I was assigned to the post, and I am still stationed at FDTP. Thank you.

**Kadoguchi** : Yes. Thank you. Next is, Mr. Dan, the national manager of the Philippines.

**Dan** : My name is Dan ( Mr. Danilo O. Sadio ) and I'm from FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES. I am currently handling the manufacturing department. Thank you.

**Sakata** : Thank you. Today, we will proceed with the above members. Thank you very much.



**FUJITSU FRONTECH LIMITED**  
Global Product Development Division  
Global Product Technical Center  
Digital innovation dept  
General manager  
**Mr. Junji Masuoka**



**FUJITSU FRONTECH LIMITED**  
Business Management Headquarters  
IT Management Division  
**Mr. Daiki Monguchi**



**FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES**  
Manufacturing Division  
Vice President  
**Mr. Yamamoto Kumpei**



**FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES**  
Manufacturing Division  
Assistant Vice President  
**Mr. Danilo Sadio**



# Introduction Background

First of all, we would like to know the work of introduction department. Could you please tell about the outline of FDTP's business?

**Yamamoto :** Our company "FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES (FUJITSU DIE-TECH)", abbreviated as FDTP. It was founded in 1996.

Business activities include the manufacture of mechanical components and financial terminal equipment, and the manufacture and sale of dies and related parts. As of the end of February 2022, we had 2,121 employees.

We have two factories in the Philippines. The first factory mainly carries out assembly and parts processing. The second factory handles assembly and parts warehouse.

The manufacturing process consists of manufacturing from parts to assembly, intermediate inspection, quality assurance, and direct shipment to overseas customers.

## Customer Profile

### FUJITSU DIE-TECH CORPORATION OF THE PHILIPPINES (FDTP)

Established: June 24, 1996 (Started operation: September 1997)  
 Capital: 245 million pesos (100% investment by FUJITSU FRONTTECH Co., Ltd.)  
 Address: 113 East Science Avenue, Special Export Processing Zone, Laguna Technopark, Binan, Laguna, Philippines  
 Business: Mfg. and sales of mechanical components (financial terminal equipment) dies and related processed parts  
 Employees: 2,121 (as of the end of February 2022)

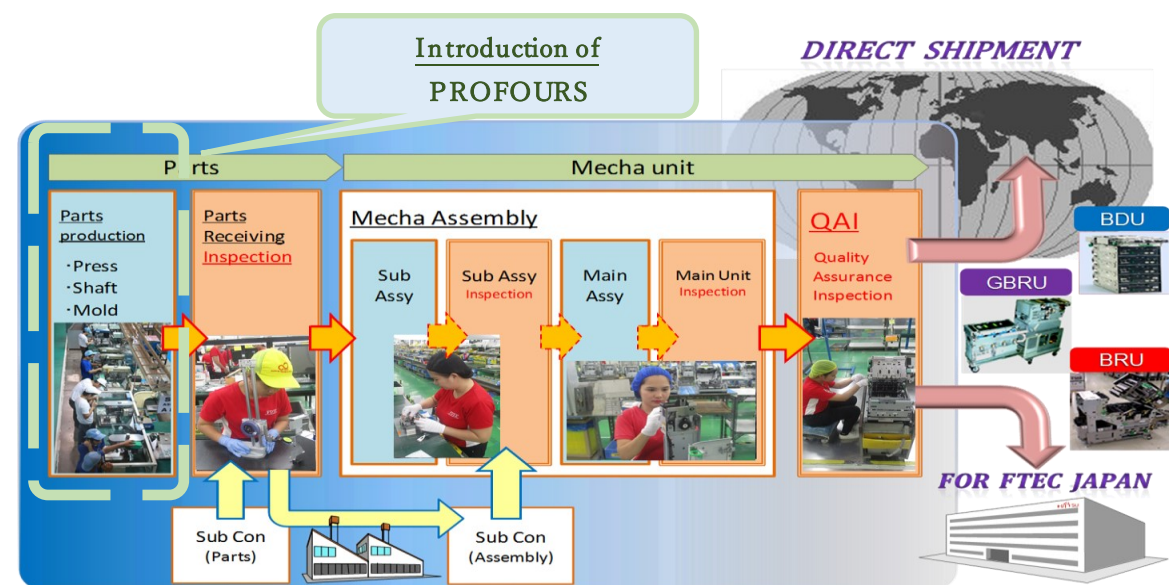
[ Factory 1 ]



[ Factory 2 ]



**Yamamoto :** This time we are introducing PROFOURS part production at the left most side.

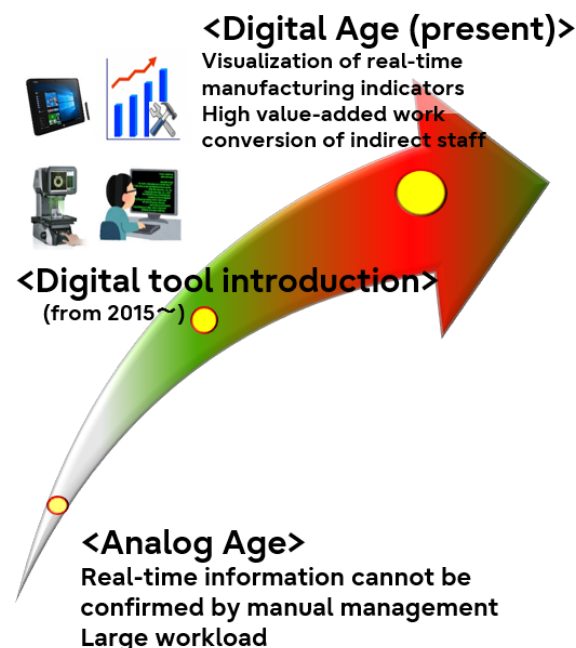


# Introduction History

**Yamamoto :** This has promoted the visualization and automation of factory management indicators. In this situation, there were many changes in parts processing and production plans, and we often relied on the experience of skilled production workers.

The fluctuation rate of the production plan was about 40%, and we spent a lot of effort to deal with this. As an improvement, we have promoted the introduction of PROFOURS.

## PROFOURS introduction details



- From around 2015, aiming to become a SMART FACTORY, utilized digital tools such as TABLET SYSTEM and VPS throughout the company, and rapidly promoted the visualization and automation of factory management indicators . . .

- The information of each department is visualized, and in the parts processing department, where changes in requirements (priority changes) occur frequently as efficiency increases, production planning (recombination) is a "sanctuary" that relies on the experience and intuition of skilled production personnel and has hindered the adoption of SMART FACTORY.
  - <Reference> 40% variation occurs for manufacturing 3000/month

⇒ Issue: Difficult to continuously operate the production plan with overall optimization with manual support that relies on skilled production man

☞ Countermeasure: Promote **automation of production planning** linked with core production system (G-Itos).

**Sakata :** Thank you.

- We know that, DIE-TECH is a subsidiary of FRONTTECH, but what is the relationship between FRONTTECH and DIE-TECH in the business process?

**Kadoguchi :** At FRONTTECH Group, we do everything from receiving orders to manufacturing, shipping, and after-sales support. Among them, FDTP in the Philippines manufactures mechanical units.

- This time, could you tell us about the background of IT introduction?

**Kadoguchi :** Last year, various terms such as "resilience" and "dynamic capability" were popular, but even in our company, we recognize that corporate innovation is an important issue.

In 2015, In the Philippines factory, we began to digitize work performance management by deploying 1 tablet for each process (total more than 1,000). We believe that the power of IT and AI will continue to be important in continuing corporate transformation



## Issues/Introduction Project Overview

### - How about supply chain related issues?

**Kadoguchi :** In case of disaster etc., the delay in manufacturing due to the delay in SCM logistics will be an issue. Even if the system is carefully constructed, there is a risk of malfunction due to unexpected trouble. Unexpected problems cannot be reduced to zero, so it is important to have a system and risk management that can quickly recover from such situations.

### - Could you give us an overview of project implementation?

**Kadoguchi :** Mr. Masuoka, can I request you for this?



**Masuoka :** As mentioned earlier, we are promoting smart factories since 2015. We have digitized various factory management indicators from the start of manufacturing to shipping. But, the production plan, which is the first input, is handled manually.

This is one of the characteristics of FRONTTECH manufacturing processes, and the fact that there are a lot of changes in requirements is a major bottleneck. Therefore, we have introduced PROFOURS to create a manufacturing plant that can respond to changes in requirements in a timely manner by automating the process.

### - In such case, what was the reason for choosing PROFOURS?

**Masuoka :** As a manufacturing factory, we decided to introduce PROFOURS to meet FDTP needs. Minimizing loss time when equipment is not in operation is one of the important points for maintaining profit and loss. PROFOURS allows us to automatically draw up production plans to maximize equipment operation, and it allows to change production plans in a timely manner whenever production plans change.

## Measures to Resolve Issue

### - Even if technology and PROFOURS are introduced, business will not change only by introducing system. In terms of changing business, it is necessary to take proper measures. What is your opinion about this?

**Masuoka :** When we introduced PROFOURS, we had a lot of difficulties. FDTP has more than 100 manufacturing facilities, and there are several processes to make one part.

It was very difficult to automate this combination, but by clearing it one by one, we were able to create a situation where PROFOURS would operate normally. We are now able to make good production plans that are highly automated.

### - It must be difficult to change the site management. What is your opinion on this, Mr. Dan?

**Dan :** Just like most of the manufacturing do. Planning is done manually. In our case we prepare weekly plan and monitor in a daily basis. We start from the order management coming from the system. We arrange each item schedule plan and balance the machine allocation and distribute it to each production areas. It is a cycle, every day, and every week.



**Kadoguchi :** As you mentioned just now, there were difficulties in planning the production of parts and managing the performance on the site. Specifically, it is setting of parameters (condition) of what kind of plan should be made because the number of machines and number of parts are large. In general production planning management, the key point is whether to create a plan forward or backward with respect to the delivery date. But in FDTP, we did not know which was the best.

This time, by using PROFOURS, we have found that FDTP is a good backward operation. Backwards are generally considered to be work-in-process inventory. It is said that an ideal form of operation is to reduce intermediate inventory. However, backward allocation has resulted in increased efficiency



## Introduction Effect

### - After introduction, did you get then expected effects?

**Yamamoto :** Originally, we mainly focused on the efficiency and automation of indirect operations, we were able to reduce the number of man-hours for indirect operations by around 40%. Improve the capacity utilization rate from 5% to 10% and reduce manufacturing lead time by approximately 20%.

By activating indirect staff and improving the operating rate, costs have improved by approximately 300K\$ per year.

In addition, the staff's indirect work has become more efficient, and the time saved was used for other improvement work. It boosted their motivation and has produced a very good effect.



**- We observed that, it has a considerable effect. On the other hand, it was understood that the improvement as a factory and as a DIE-TECH had a great effect. However, how about the effects seen from FRONTECH customer's side?**

**Masuoka :** There are many changes in customer requirements. We can respond to those requirement changes in a timely manner, and it is a very effective for part lead time. In addition, it was possible to meet the customer's request in terms of cost reduction by improving manufacturing efficiency.

**Sakata :** Thank you. Of course, there is a large production side effect, but the introduction of PROFOURS also greatly contributed to improve the value for customers.

### - Under such situations, is the support from Fujitsu satisfactory?

**Kadoguchi :** We provide a wide range of support, including technical support from the pre-kickoff phase to the introduction stage. You are always welcome to ask these questions, and we are always happy to answer them. The support team has a very high satisfactory level.

**Sakata :** In that sense, there was realization that, they provided detail and prompt support for all out problems.

## Future Prospects

### - Could you tell us if there are any points you would like to step up in order to improve operations in the future?

**Kadoguchi :** Further, want to strengthen the MES (Manufacturing Execution System) on the FDTP site. Also, by introducing a PDM (product design data management system) on FRONTECH, if we can create a system that together connects data from the manufacturing area to the design area, then it will become a company and group that is strong in manufacturing in the future.

### — What are the future prospects? Could you tell us if there is a roadmap that you are considering going forward?

**Yamamoto :** Currently, FDTP is refraining from developing new products. Along with this, new parts, new equipment, etc. will be introduced. Want to make effective use of the knowledge and insight that we have cultivated at PROFOURS, launch new facilities as soon as possible, and contribute to FRONTECH's business performance. Through this process, with the help of Fujitsu, we would like to launch a new system.

**Sakata :** Today, heard about an example of innovation in production planning operations in Fujitsu's global supply chain. Realized and understood that it was a very useful initiative as a factory, such as shortening the manufacturing lead time and shifting personnel to the original work by improving productivity.

Not only that but it is also very useful DX initiative to significantly improve customer service levels like shortening lead time for managing delivery date told by customer and improving the delivery date compliance rate.

### - Finally, could you please give us a few comments?

**Kadoguchi :** Starting with the introduction of PROFOURS, FRONTECH, DIE-TECH, and the Fujitsu Group will continue to strongly promote DX.

Now, I request to Mr. Masuoka

**Masuoka :** By introducing PROFOURS, we were able to create a smart factory, which I believe has become a great advantage for us as a parts manufacturing factory. I am very happy that I was able to introduce an effective system. Thank you very much.

Kadoguchi: Thank you very much. Now, I request to Mr. Yamamoto.

**Yamamoto :** With the introduction of PROFOURS, we were able to improve the efficiency of our indirect operations. I would like to use the time I have gained here to improve QCD and contribute to the future development of the Fujitsu Group. Thank you.

**Masuoka :** Finally, I request Mr. Dan for comment.

**Dan :** We believe PROFOURS System is a value adding system. Not only it will improve the numbers (KPI) it also increases human value. It's a great deal and we are very fortunate to have tried the system. Thank you.

**Sakata :** Today I speak with Niigata, Philippines, and Kawasaki. I Hope that the introduction of this initiative will be useful for everyone's DX.

Thank you very much.

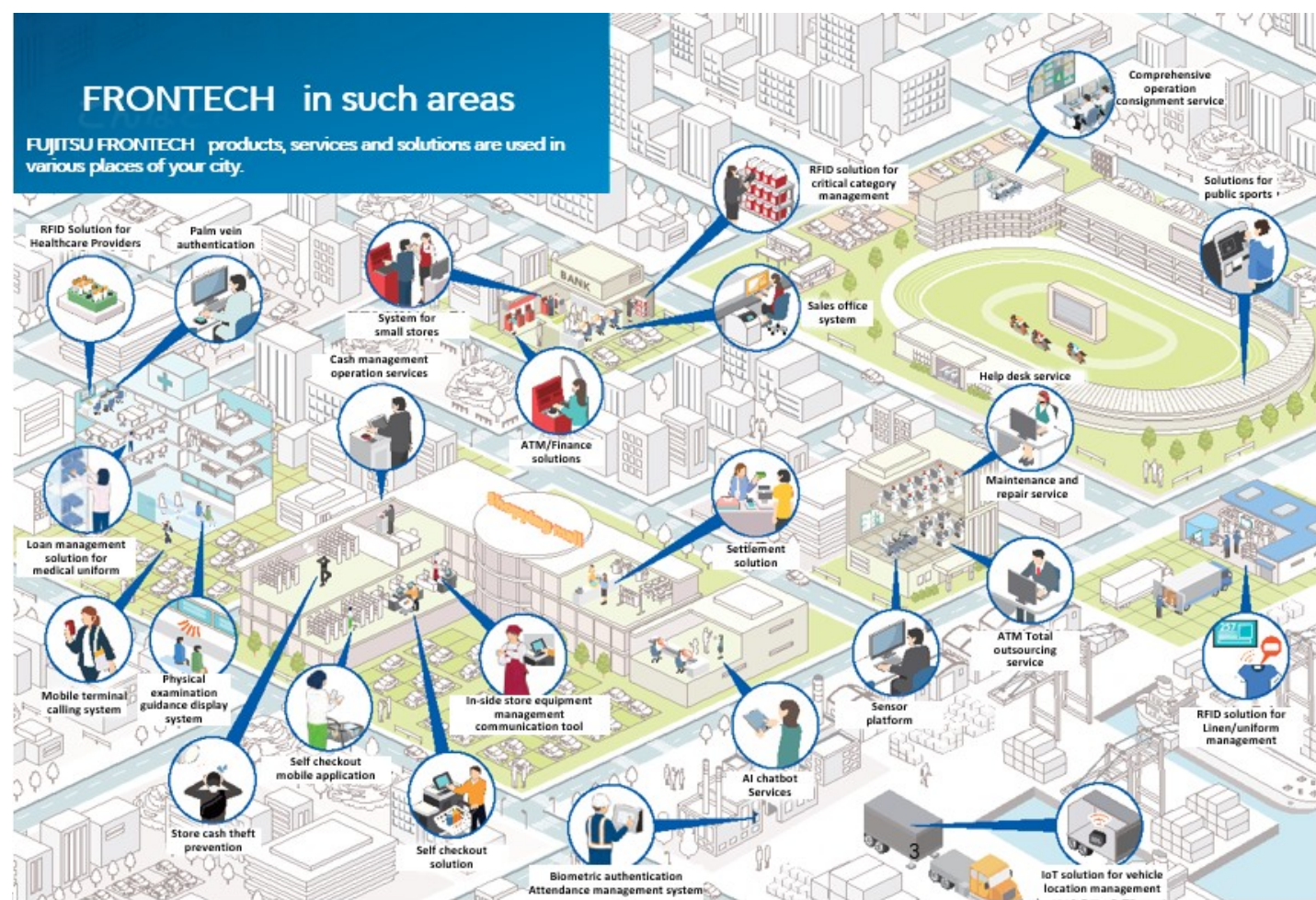
**Kadoguchi :** Thank you



# FUJITSU FRONTECH Introduction

## Company Profile

Name	FUJITSU FRONTECH Limited
Head Office	1776 Yanoguchi, Inagi City, Tokyo
Establishment	9 November 1940
Capital	8,457 million yen (As of March 31, 2022)
President Director	Hiroko Kawakami
Employee count	Consolidated: 4,869 Non-Consolidated: 1,558 (as of March 31, 2022)
Office Sales Office	Head Office/Tokyo Factory, Niigata Factory, Omiya Solution Center, Kumagaya Service Solution Center, Omori Office, Chubu Branch, West Japan Branch, Kyushu Branch



<https://www.fujitsu.com/jp/group/FRONTECH/about/>

## PART II Dialogue with the PROFOURS development manager



**KPMG Consulting**  
Operations Strategy Managing Partner  
KPMG Japan Supply Chain Advisory Leadership  
Lead partner  
Operating Officer  
**Mr. Hidehiro Sakata**



**Fujitsu Limited**  
Digital Solution Business Group  
SCM Solution Division  
Division Manager  
**Mr. Atsushi Sakurai**



## Solution Initiatives

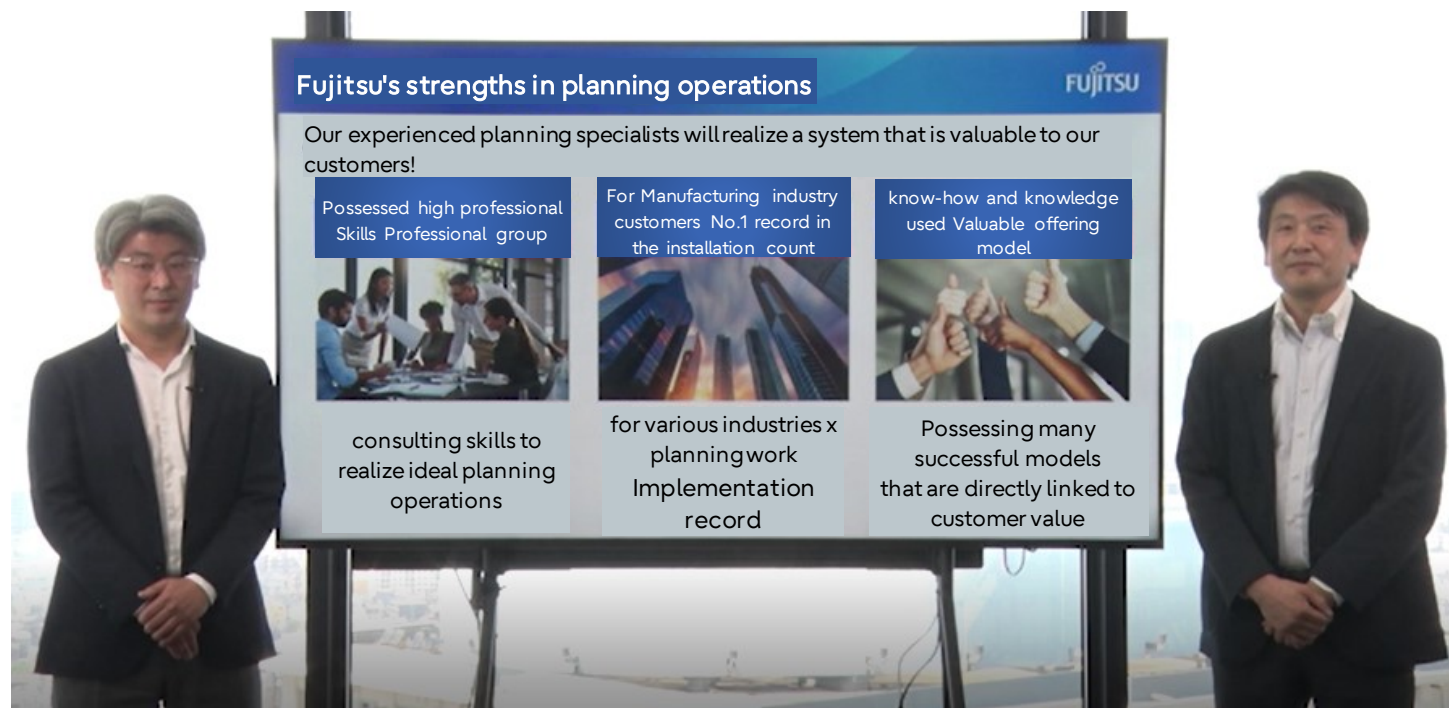
**Sakata :** As we talked earlier, Mr. Sakurai from Fujitsu, the developer of PROFOURS introduced at DIE-TECH is with us. Thank you.

**Sakurai :** Hello, this is Sakurai from Fujitsu Limited. I have been working exclusively in the manufacturing industry, and I am responsible for manufacturing work solutions such as manufacturing operations, planning systems, and production management. Thank you for your time today.

**- Mr. Sakurai, since you are in charge of Fujitsu's manufacturing industry solutions, please tell us about Fujitsu's manufacturing industry solutions.**

**Sakurai :** We at Fujitsu are in the manufacturing industry, and we are a manufacturing company. Therefore, we would like to give added value to business solutions by using and providing the strengths and know-how that we have gained.

In addition, customers naturally have various management issues, and our stance is to solve them. We are proceeding with the policy of proposing and providing solutions from the perspective of whether we should solve the issues. We not only provide the product but also, with an issue cut, we try solving the customer's worries and issues. By this point of view, we proceed with the policy of proposing and providing solutions.



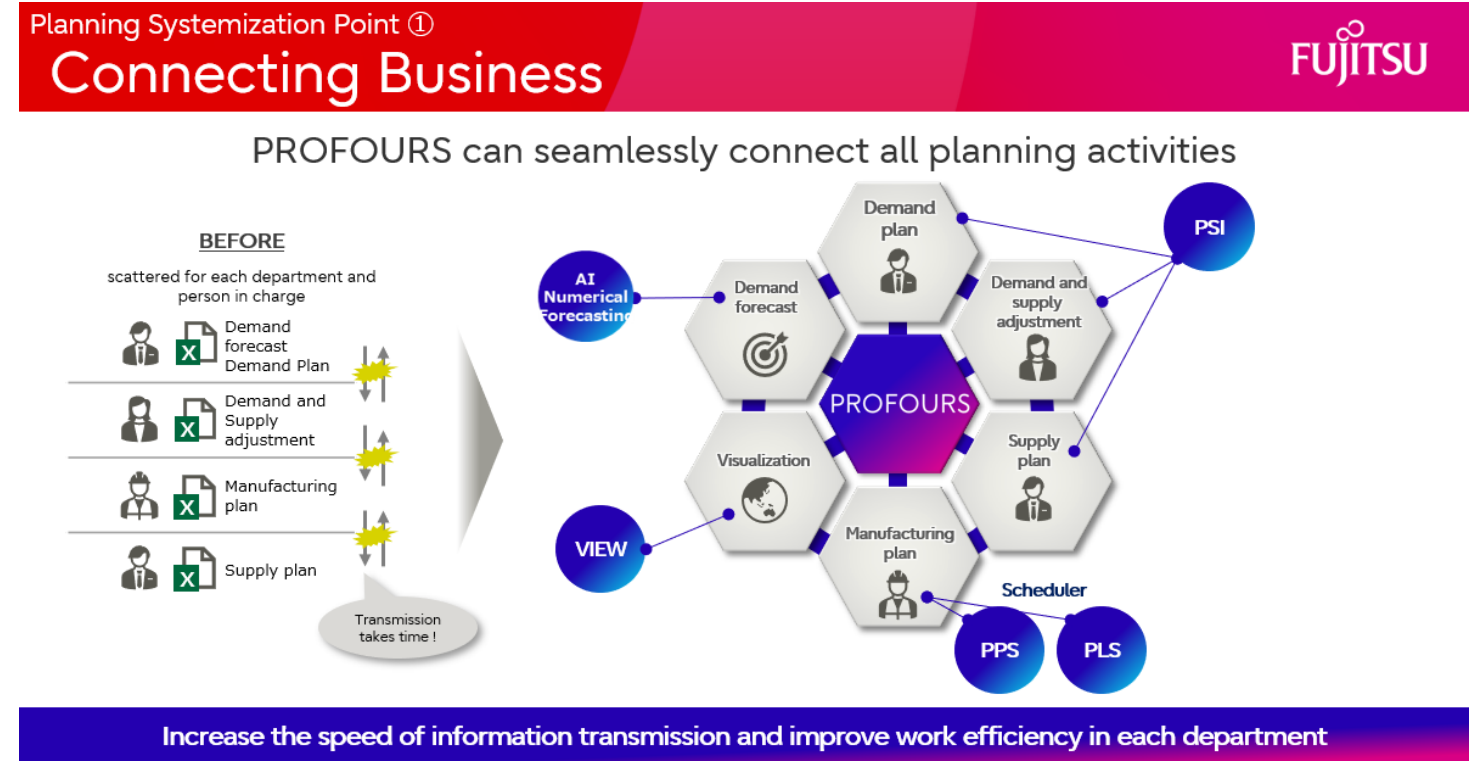
**Sakata :** Since Fujitsu itself is a manufacturer, it provides sophisticated solutions, and rather than selling solutions, it is said that the policy is to focus on customer issues and solve those issues. We have understood this concept. Thank you.

## PROFOURS appeal point ①

**- Further, please tell us about the appealing points of PROFOURS, which are introduced by Fujitsu DIE-TECH and mentioned in the previous example.**

**Sakurai :** PROFOURS has three appealing points: a plan to connect greatly, a plan that can be used, and a plan to can be continued it is recently called as sustainable.

Here we can see about connected plans. In this case, as an example, we provided the manufacturing plan and so-called scheduler, but in addition, there are other higher-level supply and demand plans and PSI etc.



Point 1 is to carry out such a plan firmly and to create a state in which these are organically connected.



## PROFOURS appeal point ②

**Sakurai** : Point number 2 is a plan that can be used. Plans are complicated depending on the type of industry and business, and the constraints are complicated. It is important, and we are working on it.

Planning Systemization Point ②

### Industry-specific manufacturing know-how

FUJITSU

Incorporating various manufacturing restrictions and ideas that differ from industry to industry into the plan

	Chemistry		Food, beverages		Auto parts	
	Film	Paint	Sweets	Soft drink	Metal	Plastic
<b>Ideal situation</b>						
<b>Roadmap/ Procedure</b>	Resin change	Color change	Variety change	Flavor change Size change	Tool change	Resin change Mold change
<b>Planning method</b>	Combination	Color shade order	Expiry date	Expiry date	Max. number of molds	Max. number of molds
<b>planning operation know-how</b>	Defect rate re-slit	Filling in multiple packing styles	Line contamination	Line contamination	Forging/ Casting	Molding (Vacuum/ Extrusion ...)
<b>PROFOURS</b>	Winding Core (Core)	Tank size (preparation, Filling)	Assorted (set product) compatible	Lingering scent	Heat treatment (batch furnace)	Max personal of assembly

Realize a mechanism that can be applied quickly, has a reliable effect, and can be used sustainably

As we can see here for example, in the chemical, food, beverage, and automotive parts industries, we combine the problems, and our idea is to provide solutions in advance for the problems and constraints that each industry faces while making plans.

## PROFOURS appeal point ③

**Sakurai** : Point number 3 is about sustainable planning. We say that the plan is a planning engine, and we can read the batch elements. But in fact, we make plan based on a track record and we also need to think about giving feedback. Including the idea of how to successfully run the so-called PDCA cycle into this solution. Working on this point 3.

**Sakata** : It means that, the business characteristics are completely different depending on the industry, so we will respond to them in detail, and by connecting the entire business end-to-end, we will cover the entire flow. We understood that it is characteristic that the system has designed can be step by step improved repetitively and continuously.

## Prospects for PROFOURS

- What are your thoughts on future solutions?

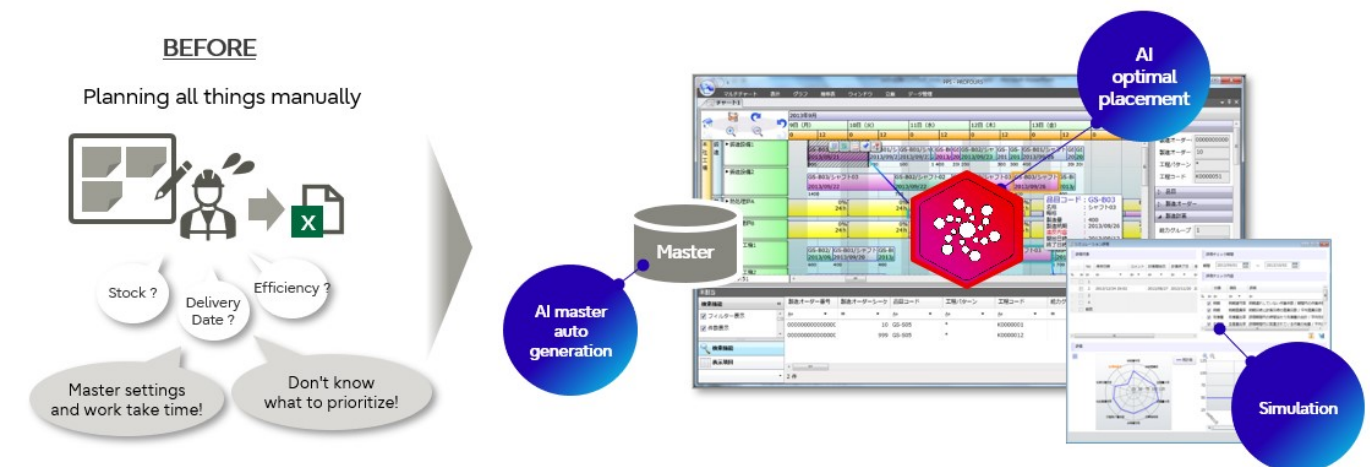
**Sakurai** : As for the prospects of the solution, first of all, I would like to think about upgrading of the plan.

Planning Systemization Point ③

### Automation and sophistication of planning

FUJITSU

PROFOURS has an automatic planning function using the latest technologies such as AI



### Reduce manual work and shift to strategic work

In that area, for example, we are always thinking about whether we can incorporate the idea of AI into this planning work. If it is possible to automatically change the master using the idea of AI when returning, it may reduce the load on the factory site, so we are thinking about incorporating such resources more and more.


In addition, by using the idea of AI for the placement of the plan scheduling and using it for demand forecasting, etc., planning work itself will be more sophisticated. Through this, we firstly think to make the factory site work easier.

**Sakata** : We came to know that Fujitsu, which is researching advanced technology, is trying to use such digital technology to lead to further growth and improvement. Thank you.

**Sakata** : Until now, the system introduction was best during introduction time and in many cases, there was a gap from the actual situation. But Fujitsu's efforts will continue to improve by its continuous use. We have realized that you are really trying to proceed with customer-oriented initiatives.

**Sakurai** : We do not stop at the introduction, but we are working on product development with the aim of having our customers continue to use the planning work for a long time. We also pass on our know-how to the next generation.





# Fujitsu Uvance Kawasaki Tower

### SCM/ERP/MES solutions for manufacturing

<https://www.fujitsu.com/jp/services/application-services/enterprise-applications/industry/>



### We support the Sustainable Development Goals (SDGs)

 <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>	 <p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	 <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	 <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>
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- PROFOURS is an abbreviation for GLOVIA smart PROFOURS

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